

REQUEST TO WITHDRAW FINALITY OF OFFICE ACTION AND
RESPONSE UNDER 37 C.F.R. § 1.116
U.S. APPLN. NO. 10/032,448

ATTY DKT Q67972

REMARKS

I. Request to Withdraw Finality of Office Action

Applicants respectfully submit that the Office Action dated April 25, 2005, was improperly made final and request withdrawal of the finality of the Office Action.

Specifically, the Examiner states that Applicants' amendment necessitated the new grounds for rejection presented in the Office Action. However, the new claims added in the amendment filed on November 10, 2005, that is, claims 15-19, are based on subject matter included in original claim 5 of the application. Therefore, the newly added claims are directed to subject matter that was recited in the original claims and the disclosure of the original application and did not necessitate the application of the newly cited reference, Ohashi et al, since the newly cited reference could have been applied to the original claims. See MPEP § 706.07(a).

In this regard we note that the MPEP states:

A second or subsequent action on the merits in any application or patent involved in reexamination proceedings should not be made final if it includes a rejection, on prior art not of record, of any claim amended to include limitations which should reasonably have been expected to be claimed. See MPEP § 904 *et seq.*

Further MPEP § 904 states "[t]he first search should cover the invention as described and claimed, including the inventive concepts toward which the claims appear to be directed" and MPEP § 904.03, states, "... the search should, insofar as possible, also cover all subject

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matter which the examiner reasonably anticipates might be incorporated into applicants' amendment."

In this case new claims were added directed to the alternative catalysts recited in original independent claim 5, which recites only two alternative types of catalyst compounds, i.e., an organic zinc compound or an amine compound. Thus, since the newly added claims merely recite one of the alternative catalyst compounds recited in original independent claim 5 (i.e., claims 15 and 16 directed to an organic zinc compound catalyst and an amine compound catalyst, respectively) and specific species of these two types of catalysts, (i.e., claims 17 and 18 directed to zinc carboxylates and claim 19 directed to amine compounds) the Examiner should have at least anticipated the subject matter recited in new claims 15-19 as part of the claimed invention. Therefore, Applicants submit that it is improper to make a final rejection wherein a new rejection is made over prior art not of record. Further, the newly cited reference could have been applied in the first Office Action since the subject matter of the newly added claims is included in original claim 5.

Further, maintaining the finality of the Office Action dated April 25, 2005, and failing to reopen prosecution under these circumstances is unfair to Applicants and against public policy. Applicants should be given a fair opportunity to define his or her invention in claims that will give patent protection to which the applicant is entitled and not be prematurely cut off in the prosecution of the application. MPEP § 706.07. To meet the goal of reaching a clearly defined issue for an early termination of proceedings, i.e., an allowance or final rejection, the Examiner is charged with conducting a careful and thorough search and fully applying the references in

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preparing the first Office Action on the merits in order for a speedy and just determination of the issues involved in the examination of the application. See MPEP §§ 706.07 and 904.03.

In view of the above, Applicants respectfully request withdrawal of the finality of the Office Action dated April 25, 2005, and issuance of a new Office Action.

II. Response to the Rejections under 35 U.S.C. § 103

Claims 5-14, 16 and 19 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawabuchi et al in view of Richter et al and Satoh.

Claims 15, 17 and 18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawabuchi et al, Richter et al, Ohashi et al and Satoh.

The Kawabuchi et al reference discloses the following three points:

- (1) Use for HDD
- (2) Urethane acrylate
- (3) Amine compound catalyst.

The Examiner asserts that Richter et al provides a fair teaching that tertiary amine catalysts also lack the shortcomings of prior art tin catalysts. However, Richter et al provides nothing about any of disadvantages, advantages and specific examples of tertiary amines. Richter et al merely refers to tertiary amines as examples of conventionally used catalysts to show a part of the background of the invention. It is evident from the disclosure that since Richter et al focuses on organic tin compounds which are, according to Richter et al (col. 1, lines 29-31), particularly valuable catalysts, it discloses disadvantages of active tin compounds such as reduced catalytic activity when stored. Thus, Richter et al does not teach or suggest

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that tertiary amines are useful, but merely proposes to use a reaction product of a sulfonyl isocyanate and a specific organic tin catalyst. It is not reasonable to interpret that usefulness is suggested since shortcomings are not mentioned.

With respect to the use of tertiary amine catalysts and organic tin catalysts, in the case where a rapid reaction is required, it is conventional to use an organic tin catalyst because it has higher activity. In particular, Richter et al is directed to a polyurethane resin (having moisture curability or of two component system) having isocyanate group terminals, and the on-site final step (by a user) is a urethane reaction or urea reaction. In such a process, the curing rate and curability are deteriorated unless a highly active catalyst is used. Richter et al points to a disadvantage of organic tin compounds of catalytic activity deterioration during storage. Richter et al does not mention disadvantages of tertiary amines. There has been a common knowledge in the art that tertiary amines have a lower activity and hence provide a worse on-site working efficiency. Thus, one of ordinary skill in the art would not consider Richter et al as recommending the use of tertiary amines. In fact, none of the Examples uses a tertiary amine.

Referring to the composition used for the present invention, on the other hand, the on-site final step (by a user) is a reaction of (meth)acryloyl groups. According to the present invention, urethane reaction is carried out within synthesis steps (upon manufacturing oligomers in a factory). Accordingly, a satisfactory reaction is attained even when an amine catalyst or an organic zinc catalyst is used as a catalyst for the urethane reaction.

Therefore, in view of the above, one of ordinary skill in the art would consider the disclosure of Richter et al to be directed to the use of an organic tin catalyst for higher activity.

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However, in order to avoid the disadvantages of the conventional organic tin catalysts, Richter et al uses specifically limited organic tin catalysts. Richter et al does not suggest at all that the problem can be also solved by tertiary amines.

Even if Richter can be considered to fairly teach that tertiary amine catalysts lack the shortcomings of the specific tin carboxylate and tin alkoxide catalysts, the reference does not disclose or teach a specific example using an amine compound (or an organic zinc compound) as recited in the present claims as a catalyst for making the polyisocyanate preparations disclosed therein. Further, none of the disclosed polyisocyanate preparations of Richter et al appear to be reacted with a hydroxy group of a hydroxyalkyl(meth)acrylate as recited in independent claim 5 of the present application. Even further, all of the examples in Richter employ a tin compound as a catalyst and therefore do not meet the element wherein no tin compound is employed as a catalyst as recited in claims 6 and 7 of the present application.

Further, Applicants submit the attached article (Attachment A), in support of their position. As discussed in the article, the catalyst for polyurethane includes amine compounds, organic metal compounds (the metal being tin, lead, zinc, cobalt, iron, manganese, etc.), and the most useful catalysts among these are tin compounds. However, what is the best selection will depend on the case. This is because catalysts may function, as a side-effect, to depolymerize polymers or to decompose polymers to CO₂. Also, there may be differences in the physical properties or light resistance of the resulting cured product. Since each catalyst has advantages and disadvantages, selection should be made depending on the intended use and objects.

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Therefore, even if one were to combine the teachings of Richter et al with the teachings of Kawabuchi et al, the present invention would not have been achieved. Further, Satoh fails to remedy the deficiencies of Richter et al and Kawabuchi et al. Thus, the prior art does not render the presently claimed invention obvious.

Similarly to Richter et al, Ohashi et al is directed to a moisture-curable polyurethane resin having isocyanate terminals. As the catalyst for the urethane or urea reaction, organic tin compounds, an organic zinc compound (only zinc octylate) and amine compounds are disclosed. However, these compounds are theoretically conceivable catalysts for urethane reaction. In fact, only organic tin compounds are employed in the Examples thereof.

Thus, the catalysts are not used for the production steps of urethane (meth)acrylate having (meth)acryloyl terminals as in the present invention. Ohashi et al does not provide any suggestion or motivation to use zinc octylate for the reaction as recited in present claims 15, 17 and 18. Even further, since Ohashi et al is directed to a polyurethane composition, there is no motivation to use the organic zinc catalysts for (1) HDD and (2) as the catalysts for synthesis of urethane acrylate.

Therefore, even if one were to combine the teachings of Richter et al with the teachings of Kawabuchi et al, the present invention would not have been achieved. Further, Ohashi et al and Satoh et al fail to remedy the deficiencies of Richter et al and Kawabuchi et al. Thus, the prior art does not render the presently claimed invention obvious.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

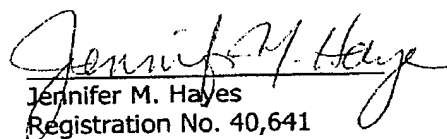
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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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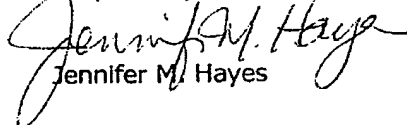
Date: July 25, 2005

CERTIFICATION OF FACSIMILE TRANSMISSION

Sir:

I hereby certify that the above identified correspondence is being facsimile transmitted to Examiner Edward J. CAIN at the Patent and Trademark Office on July 25, 2005 at (703) 872-9306.

Respectfully submitted,


Jennifer M. Hayes